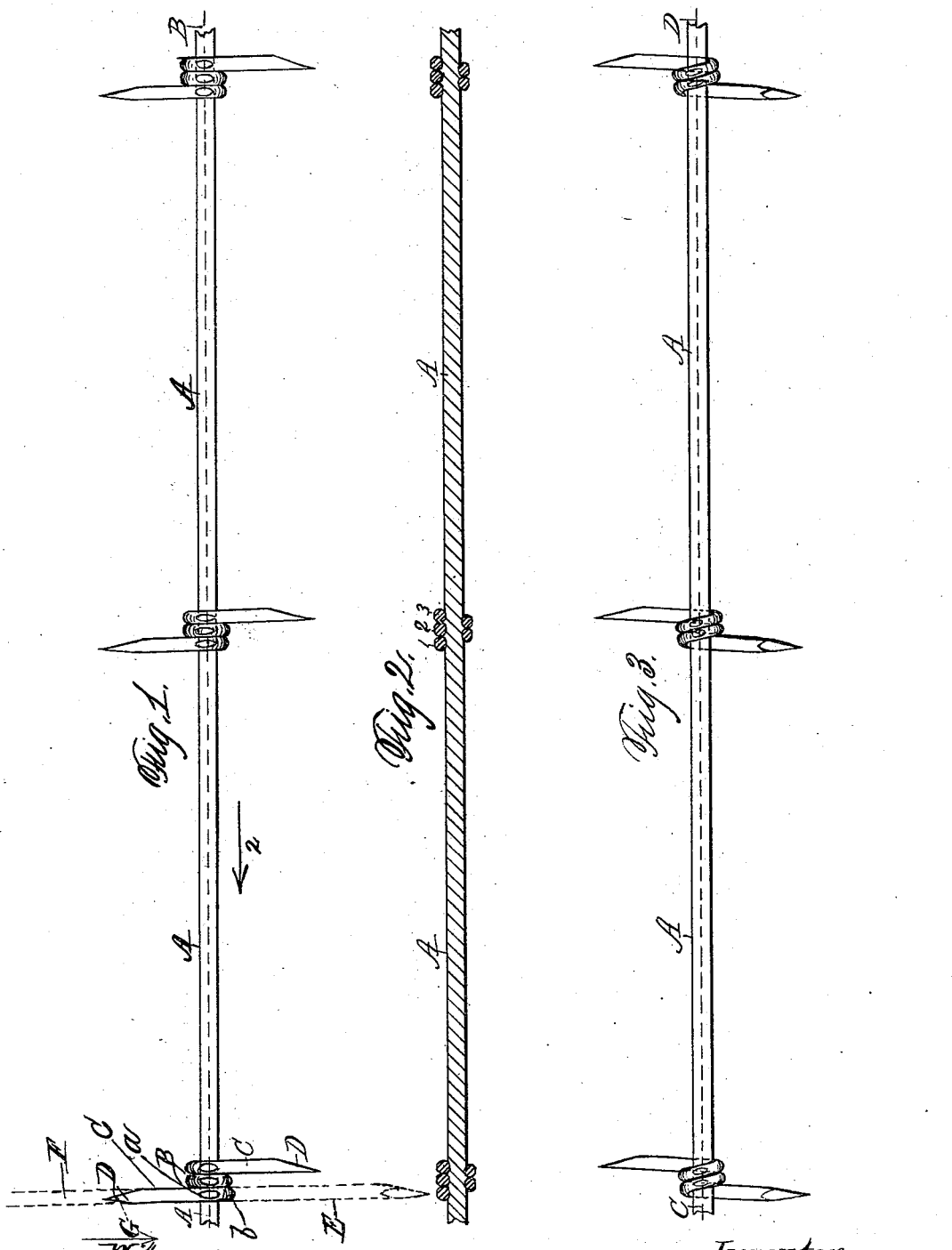
H. W. PUTNAM.

BARBED FENCE-WIRE.

No. 187,172. Patented Feb. 6, 1877.



Witnesses.

Frank W. Forbes

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UNITED STATES PATENT OFFICE.

HENRY W. PUTNAM, OF BENNINGTON, VERMONT.

IMPROVEMENT IN BARBED FENCE-WIRE.

Specification forming part of Letters Patent No. **187,172**, dated February 6, 1877; application filed January 20, 1876.

To all whom it may concern:

Be it known that I, HENRY W. PUTNAM, of Bennington, in the county of Bennington and State of Vermont, have invented certain new and useful Improvements in Barbed Fence Wire or Fencing; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a top or plan view of a section of my improved wire. Fig. 2 represents a longitudinal vertical central section on line A B, Fig. 1; and Fig. 3 represents a bottom view of the section of barbed wire shown in Fig. 1.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

In the drawings, the parts marked A represent the main fence-wire, about which the barbed wire is secured to form the coils B, projecting ends C, and barbed or pointed ends D. This barbed fence-wire or fencing is made by a continuous process or operation, as fully described in my application for Letters Patent for certain improvements in machines for making said barbed fence wire or fencing, and which application has been executed and filed of even date of this application, and consequently a detailed description of said machine and of the operation thereof is not necessary in this specification.

The barbed fence wire or fencing shown in the drawings is formed from wire drawn from two separate coils or reels, the motion of the barb-wire as it is fed forward being at right angles to the main wire A, and the portion which forms the coil B, and one of the projecting barbed ends C D, is run over and past the end of the main wire A, as indicated at E, in dotted lines, Fig. 1, when the mechanism of the machine holds the main wire A from turning or moving forward, and the mechanism also holds the barb-wire F from turning or moving backward or forward, while a presser-foot rests upon the barb-wire at the point *a*. A rotary shaft, through which the main wire passes, now commences to revolve, and a finger projecting from its end strikes the end E of the barb-wire at the point *b*, and carries it down and under the main wire A, and by means of an inclined guide the wire end E is forced to move back, so as to wind about the main wire A in the form of a screw, and consequently it comes up back of the uncut portion of the barb-wire F, the coiling-shaft being arranged so that it moves back as the end E is wound back upon the main wire A. After the first revolution the end of wire E is guided back by the previously-formed spiral of the coil. The winding-finger stops after coiling the end E about the main wire, as shown in full lines, Fig. 1. The cutter now comes forward and severs the coil B from the main barb-wire F, as shown at G in full and dotted lines, Fig. 1. The main wire, at the same time the cut is being made, is moved along in the direction indicated by arrow 2, and the newly-formed coil B is carried along and carried between a pair of compressing-dies, by means of which coil B is compressed upon two sides with great power and force upon the main wire A, whereby the separate strands of the coil 1, 2, and 3 are flattened upon their outer, upper, and under sides, whereby said strands are forced into the main wire, causing spiral indentations upon two sides of the main wire.

By this mode of construction the barbed wire or fencing shown in the drawings can be made with great expedition and facility, while the barbed ends C D are held in rigid positions by means of their coils B having been compressed about and set into indentations in the main wire, as shown and described. By this mode of construction each separate strand of the coil presents a resisting-force when power is applied to rotate the barbed ends about the main wire; consequently animals running against or pressing upon barbed ends C D will be pricked and turned back.

There being great uniformity in the constructing and securing of the coil B, and barbed ends C D about the main wire A, the barbed ends always projecting horizontally above one side of the main wire, the barbed fence wire or fencing can be wound upon a reel or cylinder as it passes from the machine, and in such a manner as not to have the barbed ends of one strand entangled or snarled

up with another strand or the barbed ends thereon. This is owing to the fact that the different barbed ends are separated by a distance equal to the diameter of the main wire and the diameter of the barbed wire. This is a very important feature of the invention, since it enables the wire to be wound and unwound as readily as if the barbs were not combined with the main wire.

I am aware that previous to my invention barbs had been coiled upon a round wire, and also upon a round wire the sides of which had been first flattened, and that barbs had been stamped from sheet or plate metal, and provided with holes, and afterward slipped upon a round wire and compressed thereon, and all such devices I disclaim; but

Having described my improved barbed fence wire or fencing, manufactured from two separate coils, reels, or strands of wire by a continuous mode of operation, what I claim therein as new and of my invention, and desire to secure by Letters Patent, as an improved article of manufacture, is—

A barbed fence wire or fencing, produced or formed by the combination, with the round wire A, of wound or coiled barbs B, pressed down upon the main wire A, so as to produce spiral indentations upon two sides of the wire, as and for the purpose described.

HENRY W. PUTNAM.

Witnesses:

FRANK W. POOLER,

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